Listing of Claims

Please amend the claims as follows. This Listing of Claims will replace all prior versions and listings of claims in this application:

Claims

1. – 32. (Canceled)

33. (New) A bioadhesive composition consisting essentially of:

(a) about 28-60 wt% of a copolymer component comprising repeating units derived from copolymerizing at least two members selected from the group consisting of: (i) one or more monomers selected from olefinically unsaturated sulphonic acids; (ii) one or more olefinically unsaturated carboxylic acids, the ratio by weight of the sulphonic acid units to the carboxylic acid units being in a range from about 30:1 to 1:1, and (iii) an alkoxy polyethyleneglycol acrylate or methacrylate;

(b) about 20-45 wt% of a plasticizer component; and

(c) about 10-55 wt% of water.

34. (New) The composition of claim 33, wherein the copolymer component comprises one or more sulphonic acid units selected from the group consisting of:

(a) 2-acrylamido-2-methyl-propanesulphonic acid or a salt thereof;

(b) 2-acrylamido-2-methyl-propanesulphonic acid sodium salt (NaAMPS or ATBS-Na); and,

(c) 3-sulphopropyl acrylate (SPA) or a salt or analog thereof.

35. (New) The composition of claim 33, wherein the copolymer component comprises carboxylic acid units selected from the group consisting of acrylic acid, methacrylic acid and mixtures thereof.

36. (New) The composition of claim 33, wherein the copolymer component comprises about 32-52 wt% of the composition.

37. (New) The composition of claim 33, wherein the copolymer component comprises sulphonic acid units and carboxylic acid units in a weight ratio of about 2.5:1 to about 12:1 of sulphonic acid to carboxylic acid units.

38. (New) The composition of claim 33, wherein the copolymer component includes an alkoxy polyethyleneglycol acrylate or methacrylate component selected from the group consisting of methoxy polyethylene glycol monoacrylate and methoxy polyethylene glycol monomethacrylate.

39. (New) The composition of claim 33, wherein the composition includes alkoxy polyethylene glycol acrylate or methacrylate in an amount of about 1-10 wt% of the composition.

40. (New) The composition of claim 33, wherein the composition includes copolymerised β-carboxyethyl acrylate in an amount of about 1-10 wt% of the composition.

41. (New) The composition of claim 33, wherein the plasticizer component comprises about 25-45 wt% of the composition.

42. (New) The composition of claim 41, wherein the plasticizer component comprises a water-soluble polyhydric alcohol that is liquid at ambient temperatures.

43. (New) The composition of claim 42, wherein the plasticizer component comprises glycerol or a mixture of glycerol and one or more other polyols.

44. (New) The composition of claim 33, wherein the composition includes a mono- or diester of polyethylene glycol.

45. (New) The composition of claim 44, wherein the composition includes a mono- or diester of polyethylene glycol with lauric acid, myristic acid, palmitic acid, stearic acid, oleic acid, arachidic acid or erucic acid.

46. (New) The composition of claim 33, wherein the composition comprises about 10-35 wt% water.

47. (New) The composition of claim 33, wherein the composition comprises about 25-32 wt% water.

48. (New) The composition of claim 33, wherein the composition includes a cationic olefinic comonomer selected from copolymerised acryroyl oxyethyl trimethyl ammonium chloride and 3-acrylamidopropyl trimethyl ammonium chloride in an amount of 0.1% to 15 wt% of the composition.

49. (New) The composition of claim 48, wherein the catonic olefinic comonomer is present in an amount of 0.1% to 5 wt% of the composition.

50. (New) A bioadhesive composition consisting essentially of a hydrogel mixture selected from the group consisting of mixture A, mixture B and mixture C as follows:

Mixture A:

(A1) about 28-60 wt% of a polymer based on repeating units derived from one or more monomers selected from olefinically unsaturated sulphonic acids;

(A2) about 20-45 wt% of a plasticizer(s);

(A3) about 10-55 wt% of water; and,

(A4) at least one member selected from an alkoxy polyethyleneglycol acrylate, methacrylate and β-carboxyethyl acrylate, acryroyl oxyethyl trimethyl ammonium chloride or 3-acrylamidopropyl trimethyl ammonium chloride, the balance of the composition being electrolyte and optional ingredients;

Mixture B:

(B1) a copolymer comprising repeating units derived from (i) one or more monomers selected from olefinically unsaturated sulphonic acids; and (ii) one or more olefinically unsaturated carboxylic acids, the ratio by weight of the sulphonic acid units to the carboxylic acid units being from about 30:1 to about 1:1;

(B2) a water-soluble polyhydric alcohol that is liquid at ambient temperatures;

(B3) a mono- or di-ester of polyethylene glycol with lauric, myristic, palmitic, stearic, oleic, arachidic or erucic acid; and,

(B4) water; and,

Mixture C:

(C1) a copolymer comprising repeating units derived from: (i) one or more monomers selected from olefinically unsaturated sulphonic acids; (ii) one or more olefinically unsaturated carboxylic acids, the ratio by weight of the sulphonic acid units to the carboxylic acid units being from 30:1 to 1:1; and (iii) β-carboxyethyl acrylate;

(C2) a plasticiser; and,

(C3) water.

51. (New) A medical device comprising a layer of a bioadhesive composition according to claim 33.

52. (New) A medical device according to claim 51, wherein said device is selected from the group consisting of medical electrodes and medical bandages.